

**Regional Ultra-Low Flush Toilet Rebate Program
Grant Application**

PROPOSAL PART ONE

1. Applying for: Prop 13 Urban Water Conservation Grant
2. Principal applicant: Inland Empire Utilities Agency
3. Project Title: Regional Ultra-Low Flush Toilet Rebate Program
4. Person Authorized to Sign: Richard W. Atwater
9400 Cherry Ave.
Fontana, CA
909-357-0241
atwater@ieua.org
5. Contact Person: David Hill
Same
dhill@ieua.org
6. Funds Requested: \$150,000
7. Local Funds: \$325,000
8. Total Project Costs: \$475,000
9. Estimated Total Quantifiable project benefits (dollar amount) \$1,351,616
10. Estimated annual amount of water to be saved (AF): 157 AF
Estimated total amount of water to be saved (AF/20 years): 3,136 AF
Estimated benefits to be realized in terms of reduced imported water demand,
water and wastewater treatment costs: \$2,271,000
11. Duration of Project (month/year to month/year): July/2002 to June/2004
12. State Assembly Districts where the project is to be conducted: 61st and 63rd
Districts
13. State Senate Districts where the project is to be conducted: 29th, 31st, and 32
Districts
14. Congressional District(s) where the project is to be conducted: 41st and 42nd
Districts
15. County where the project is to be conducted: San Bernardino County
16. Date most recent UWMP submitted to the DWR: December 2000
17. Type of Applicant: (e)
18. Project Focus: Urban
19. Project Type: (a)
20. Do the actions in this proposal involve physical changes in land use, or potential
future changes in land use? No

Proposal Part One
B. Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and,

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

Signature

Name and Title

Date

Project Summary

The Inland Empire Utilities Agency (IEUA) is a wholesale water district that distributes imported water, provides industrial/municipal wastewater collection and treatment services, recycled water, and other services to the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland. The Agency serves a population of approximately 700,000 in a 242-square mile service area of southwest San Bernardino County.

IEUA is a signatory to the California Urban Water Conservation Council (CUWCC) memorandum of understanding (MOU) regarding urban water best management practices (BMP). IEUA is committed to implementing the fourteen BMP's identified in this conservation agreement. IEUA completed an Urban Water Management Plan (UWMP) in December 2000 that sets a goal of saving 25,000 acre-feet of water per year by 2020.

The Problem

The replacement of non-conserving toilets with new, ultra-low-flush models represents a significant opportunity for water conservation within IEUA's service area. The IEUA service area is comprised of seven cities with a total population approaching 700,000 people (2000 census estimate). The per-1992 population is estimated to have been slightly less than 590,000 people. The pre-1992 housing stock can be estimated at 211,000 units (2.8 persons/dwelling unit). Through existing ultra-low flush (ULF) toilet replacement efforts, IEUA and its member agencies have replaced 16,200 dwelling units within the service area. The remaining 194,800 dwelling units represent the total estimated inventory that needs to be addressed with an expanded program and additional resources.

The Solution

To address the ULF toilet demand described above, IEUA has, since 1991, had a ULF toilet program that successfully exchanged between 2,000 and 3,000 toilets per year; focused exclusively on single family retrofits. During Fiscal year 2001/2002, the IEUA ULF toilet program was expanded to include an annual target of 5,000 additional ULF toilet exchanges for multi-family housing stock. Also added, during this fiscal year, was a ULF toilet Rebate Pilot Program for the City of Chino Hills. The pilot rebate program allowed the participation of residents that could take advantage of a ULF toilet, but desired a more up-scale model than the standard white 1.6-gallon per flush units offered in the other two exchange program elements

Implementation of the proposed Regional Ultra-Low Flush Toilet Rebate Program (Program) will provide an opportunity to expand the water conservation program to include an additional 'market sector' for residential customers across the entire Agency service area. The Program will benefit the local communities within the IEUA service area as well as the entire Southern California Region through water conservation. Water conservation not only saves water but also reduces wastewater generation and energy consumption. These savings are both local and regional. CALFED will directly benefit from the Program with a reduced amount of Delta exports. As a result of this and other

water resource management programs implemented at the local level, IEUA will not have to import additional water supplies from the Bay-Delta to meet its future demands.

Water conservation programs across the State, that effectively replace non-conserving toilets with ULF toilets have proven their value. The funding requested will facilitate the exchange of 5,000 units in the next two years, nearly doubling the existing rate of ULF toilet exchange within the service area. Through this rebate program, the Agency estimates 51,166,000 gallons of potable water will be saved annually (157 AFY). Over the estimated 20-year life of the equipment, 3,136 AF will be conserved.

The Best Management Practices adopted for the proposed program include: BMP 10 for Wholesale Agency Assistance Programs and BMP 14 for Residential Ultra-Low Flush Toilet Replacement Programs.

PART A. Scope of Work: Relevance and Importance

1. Nature, Scope, and Objectives of the Project

IEUA has implemented a regional water conservation program for over a decade. This program has focused on measures to reduce water use during droughts as well as to achieve long-term conservation. In cooperation with its seven member agencies, IEUA has distributed approximately 16,200 ULF toilets within its service area since 1991. Most of these toilets have been given out through single-event distributions. Overall, 63% of the cost associated with the toilet program has been funding through the Metropolitan Water District of Southern California local projects program. In order to maximize water conservation throughout its service area, IEUA plans to expand and introduce new elements to its existing residential ULF toilet water conservation program.

An incentive-based conservation program provides a financial reward to enhance a purchasing decision. Incentive-based water conservation programs for residential customers have gained national recognition. This program gives customers the opportunity to retrofit their existing high volume toilet with a ULF toilet of their choice. The retrofitted toilets will conserve approximately 3.5 gallons of water per flush. Since the ULF toilet has an estimated life of 20 years, water savings is compounded significantly beyond the year of installation. IEUA has negotiated with its member agencies to commit additional funding, increasing annually, to water conservation programs such as the proposed Regional Ultra-Low Flush Toilet Rebate. The additional funding requested in this grant application will serve to “jump start” the planned acceleration.

The goal of the proposed project is to retrofit 5,000 residential high volume toilets between July 1, 2002 and June 30, 2004 through an incentive-based program. Completing the grant-related toilet exchanges will conserve approximately 157 AFY; which will result in a 20-year savings total of more than 3,136 AF.

IEUA will provide a Project Administrator with responsibility for the direction of a local Contractor with experience including the administration of incentive-based water conservation programs to implement this third facet of IEUA's regional ULF toilet program. Adding this rebate program to the existing (popular) Single Family Residential distributions and the recently initiated Multi-family distribution creates a full range of programs to access the full "marketplace" of demand for ULF toilets with the Agency's service area.

IEUA will utilize funding from the Metropolitan Water District (MWD) Conservation Credits Program (CCP) in the amount of \$60 per ULF toilet for a total project contribution of \$300,000. IEUA will add \$5 per ULF toilet for a total project contribution of \$25,000. This request for funding from DWR/Prop 13 will provide \$30 per ULF toilet for a total project contribution of \$150,000. Total project funding is \$475,000. The total project funding will provide a \$75 rebate to the end use customer for each ULF toilet purchased and installed and provide for marketing and administrative costs.

Through this rebate program, the Agency expects to conserve more than 51,000,000 per year, or 157 AFY. The proposed program is locally cost effective and has a Benefit-Cost ratio of 8.63. The program also fulfills the requirements of BMP #10 for Wholesale Agency Assistance Programs and BMP #14 for Residential Ultra-Low Flush Toilet Replacement Programs.

PART B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment

1. Methods, Procedures and Facilities

Rebate programs are the backbone of the collective water conservation effort in California. IEUA's decade-long worth of experience with single-event ULF toilet distributions in the residential sector will provide a strong foundation for the proposed program expansion. IEUA's goal is to provide customers the option to select their own ULF toilet. This will be accomplished by adding a regional rebate program to the current array of "event" distributions implemented by IEUA's member agencies. Agency-wide, an estimated 194,800 dwelling units need retrofit ULF toilets installed within the 242 square-mile IEUA service area.

The Program implementation will target 5,000 of the pre-1992 residential dwellings within the IEUA service area. An experienced contractor will be selected through a request for proposal (RFP) process to administer the rebate program. Program participants will be afforded the opportunity to purchase the 1.6 gallons per flush (gpf) toilet of their choice. The Program will provide a rebate of \$75 for the replacement of toilets using 3.5 gpf or greater. A maximum of two rebates per household will be provided. Qualifications for Program participants will include the following criteria:

- ?? Verify residency within the IEUA service area.
- ?? Verify that the toilet(s) to be replaced uses 3.5 gpf or greater.

- ?? Purchase and install the new ULF toilets between November 2002 and June 2004.
- ?? Purchase by June 30, 2004 and the application form with original, unaltered, dated sales receipt for the ULF toilet(s) with the make and model listed by July 31, 2004.
- ?? Consent to a post-installation verification inspection by signing the completed application.
- ?? Agree to provide IEUA with requested information for the evaluation of the Program.

IEUA is one of many member agencies participating in the Metropolitan Water District of Southern California's (MWD) ULF toilet water conservation program. DWR Prop 13 funding would be used in conjunction with IEUA and MWD funding to provide rebates for ULF toilets purchased and installed under this program within the IEUA service area. This program will provide financial incentives that would offer sound economic justification for participation in the IEUA water use efficiency program.

2. Statement of Critical Issues

IEUA's service area in the Chino Basin is one of the fastest growing watersheds within California. The current watershed population of almost 1 million people is expected to double within the next twenty years. As a result of this growth, the need for reliable potable water supplies will also dramatically increase.

Water usage within the Chino Basin is currently about 300,000 acre-feet of water per year, of which about 50,000 acre-feet comes from the State Water Project (because of water quality constraints within the groundwater basin, the region cannot accept Colorado River). Without local conservation, recycling and groundwater conjunctive use programs, the region's need for additional imported water from the State Water Project is expected to climb to 100,000 acre-feet to 125,000 acre-feet per year and will place additional pressure on the San Francisco Bay Delta system.

IEUA is committed to implementing local projects that will reduce the region's dependence on imported State Water Project supplies. IEUA's service area is located within the "Solution Area" identified in CALFED's Record of Decision (ROD). The Agency is committed to helping CALFED achieve the commitments of the ROD.

In December 2000, the Agency completed an Urban Water Management Plan that sets the goal of eliminating the need for imported water supplies for up to three years during droughts. Conservation is a critical element in this regional strategy. The Agency's objective is to achieve annual water savings of 25,000 acre-feet by the year 2020. The water conservation program is consistent with the Chino Basin Peace Agreement and the Optimum Basin Management Plan. In addition, the program meets IEUA's commitment to the California Urban Water Conservation Council Memorandum of Understanding.

The proposed Ultra-Low-Flush Toilet Rebate Program is expected to produce up to 157 acre-feet of water savings per year and over 3,136 acre-feet over the twenty-year life of

the equipment. These savings will directly benefit CALFED and the San Francisco Bay Delta because they offset water that would otherwise need to be imported from northern California.

3. Task List and Schedule

Below is a task list and schedule with estimated costs associated with each task.

| Date | Task | Budget Item | Amount |
|-----------------|------------------------------------|--------------------|------------------|
| Jul '02 | Issue RFP for Contractor | IEUA Time | \$0 |
| Aug '02 | Award Contractor Contract | IEU Time | \$0 |
| Oct '02 | IEUA and DWR Contract Execution | IEUA Time | \$0 |
| Oct '02-Jun'04 | Market and Administer Program | DWR/Prop 13 & IEUA | \$100,000 |
| Oct '02-Jun'04 | Rebates | DWP/Prop 13 | \$125,000 |
| Oct '02-Jun '04 | CCP Credit | MWD | \$300,000 |
| Aug '04 | Final Report and Accounting to DWR | IEUA | \$0 |
| | Total Estimated Costs | | \$475,000 |

4. Monitoring and Assessment

IEUA's program contractor will provide regular activity reports on the number of rebates issued for the purchase and installation of ultra-low-flush toilets. IEUA summarizes this data in quarterly reports to MWD. Installation will be verified through a combination of customer telephone surveys and site visits. A 10% random sample of customers receiving the rebate will be contacted. The effectiveness of using a rebate program to distribute ULF toilets will be assessed by IEUA through a comparison of program participation rates in the single-event distributions and the rebate program. Water savings will be derived from program participant data (e.g., customer name, address, number of fixtures installed) using industry-accepted water savings estimates for the ULF toilets, (28 gpd for single-family (SF) homes). IEUA will incorporate data from this program in California Urban Water Conservation Council bi-annual reports and Urban Water Management Plan updates. For quality control, IEUA will conduct a post-rebate phone survey to assess customer satisfaction. The results will be included in the final project report.

5. Preliminary Plans and Specifications (Not required for this grant application)

Part C. Qualifications of the Applicants and Cooperators

1. Project Managers

Inland Empire Utilities Agency – Kathy Tiegs, Conservation Coordinator
Resume is attached

Inland Empire Utilities Agency – David Hill, Manager of Water Resources
Resume is attached.

2. External Cooperators

Program contractor will be secured through an RFP process.

Part D. Benefits and Costs

1. Budget Breakdown and Justification

| Items | Costs | Justification |
|--------------------------------------|------------------|---------------------------------------|
| Land Purchase/Easement | \$0 | |
| Planning/Design/Engineering | \$0 | |
| Marketing | \$75,000 | Marketing to promote rebate program |
| Rebates | \$375,000 | Total rebate funds from contributors |
| Equipment Purchases/Rentals | \$0 | |
| Environmental Mitigation/Enhancement | \$0 | |
| Administration | \$25,000 | Staff time for project administration |
| Project/Legal/License Fees | \$0 | |
| Contingency | \$0 | |
| Total | \$475,000 | |

2. Project Cost Sharing

IEUA will utilize funding from the Metropolitan Water District (MWD) Conservation Credits Program (CCP) in the amount of \$60 per ULF toilet for a total project contribution of \$300,000. IEUA will add \$5 per ULF toilet for a total project contribution of \$25,000. This request for funding from DWR/Prop 13 will provide \$30 per ULF toilet for a total project contribution of \$150,000. Total project funding is \$475,000. The total project funding will provide a \$75 rebate to the end use customer for each ULF toilet purchased and installed and provide for marketing and administrative costs.

Rebate Cost Share (by Contributor)

| Fixture | MWD | DWR Prop 13 | Total Rebate |
|--------------------|---------|-------------|--------------|
| 1.6 gpf ULF Toilet | \$50.00 | \$25 | \$75 |

3. Benefit Summary and Breakdown

| Estimated Water Savings Per ULF Toilet Per Year | Results |
|--------------------------------------------------------|-----------------|
| 1.6 gpf ULF Toilet | 28 GPD |
| Estimated Annual Savings | 10,220 GPY |
| Percent Reduction | 68% |
| Convert to Hundred Cubic Feet (HCF) | 13.66 HCF Saved |
| Convert to Acre Feet | .03 AFY Saved |

| Estimated Water Savings For Total Project | Results |
|------------------------------------------------------|-----------------|
| 5,000 ULF Toilets | 51,100,000 GPY |
| In Acre Feet | 156.8 AFY |
| Estimated Life of the ULF Toilet | 20 Years |
| Total Water Savings in AF for life of product | 3,136 AF |
| Project Cost | \$475,000 |
| Cost per AF (\$475,000 Project Cost, 3136 AF) | \$151.47 per AF |
| Cost per AF Local Share (\$325,000, 3136 AF) | \$103.64 per AF |
| Cost per AF DWR/Prop 13 Funding (\$150,000, 3136 AF) | \$47.83 per AF |

| Estimating the Value to the End User per unit | HCF | Annual Savings |
|----------------------------------------------------------|------------|-----------------------|
| Value to Customer @ \$1.25 per HCF (Retail Water Rate) | 13.66 | \$17.08 |
| Value to Customer @ \$1.75 per HCF (Retail + Sewer Rate) | 13.66 | \$23.91 |

| Estimating the Value Installed to IEUA | Results |
|-----------------------------------------------|----------------|
| Marginal Cost of Water (Imported) | \$431 |
| Value to IEUA (Annual Savings) | \$67,580 |
| Value to IEUA (Life of Project) | \$1,351,616 |
| Present Value of Saved Water (6%, 20 yrs) | \$4,100,763 |
| Local Investment | \$325,000 |

Net Present Value Method

NPV = Discounted Benefits – Costs

$$\$4,100,763 - \$475,000 = \$3,625,763$$

Benefit Cost Ratio Method

BCR = Sum of Discounted Benefits/Sum of Costs

$$\$4,100,763/\$475,000 = 8.63$$

Simple Pay Back Analysis

Savings per Year = \$67,580

IEUA @\$431/AF x 156.8 AFY = \$67,580/year

$$\$475,000/\$67,580 = 7.03 \text{ Years}$$

Additional benefits from this program include reduced demand on wastewater treatment facilities (water and energy savings). The program supports the region's implementation of the Chino Basin Optimum Basin Management Program and the 2000 Peace Agreement.

Part E. Outreach, Community Involvement and Acceptance

As a wholesale water agency, IEUA has developed its conservation program in collaboration with the seven member agencies that serve as the water retailers for the service area. The conservation program is strongly supported by these cities and agencies. The program is also strongly supported by the Chino Basin Watermaster and Chino Basin Water Conservation District. The region is committed to achieving the 25,000 acre-foot conservation goal set by the Urban Water Management Plan.

The proposed Ultra-Low-Flush Toilet Rebate program has been developed with the full involvement of IEUA's member agencies. They have agreed to help promote the program and to provide staff support as necessary. Outreach efforts will include a press conference announcing the availability of the rebate, advertising through member agency newsletters and publications, local cable television spots and publicity through local papers. Program advertising will feature two messages: the value of conserving water within the Chino Basin and the importance of contributing to the protection of the San Francisco Bay Delta by reducing regional demand for imported State Water Project water.

Conclusion

The ULF Toilet programs are an essential component of IEUA's regional conservation strategy. The Regional Ultra-Low Flush Toilet Rebate Program offers an opportunity to establish a conservation ethic within another sector of the population of the Chino Basin. The water conservation savings are substantial at 3,136 AF over the 20 year life of the project. By providing the requested funding, necessary to provide incentives for participating in the conservation effort, the State of California (through DWR) is significantly adding to the "water solution" for California's future.